

THESIS THESIS

by

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The entire written transcript is derived from the
accompanying videotape (24 minutes).

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Abstract

Educating both the medical profession and the public
in the value of postmortem examinations and addressing the
phenomenon of the downward national trend in autopsies is
central to this thesis.

Thesis Supervisor: Richard Leacock _____

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Man is literally split in two: He has an awareness of his own splendid uniqueness in that he sticks out of nature with a towering majesty, and yet he goes back into the ground a few feet in order blindly and dumbly to rot and disappear forever. It is a terrifying dilemma to be in and to have to live with.

Ernest Becker
The Denial of Death

THESIS THESIS

TRANSCRIPT

Sometimes there's an air of informality in here which uh would make filming a little uh, you do edit this a bit don't you?

Oh yeah, she she's trying to find the most sort of uh easiest way to show this without making it look, frightening.

It is bloody, it is bloody. Who's going to see it, who's going to see it?

Well the public hopefully but she has some like using um special effects and things you can make it so it's not like um total straightforward.

Like dedicated researchers instead of ghouls.

That's the problem with pathologists.

And also you know we can't really, it's difficult to be ginger, there's no reason to be.

Yeah.

Here's a man's heart, take a look, as you can see, anterior there's a huge hole - does everyone see that hole there - see that hole there? What this man did was that

he ruptured his heart and bled into his sack that holds the heart and that what caused death. Now what caused that essentially was that he had a heart attack but the heart attack might not have been apparent. He could have had that the day before. He might have had just a big abdominal complaint or chest pains and then he got up, did something and collapsed and died. He collapsed and died because he killed his heart muscle, it finally ruptured and he bled, it went into his pericardial sack. Did they suspect this clinically?

No, the patient was really found dead, at home. They didn't have any idea why.

Yeah. He was found dead at home. So there's a nice example, here is truly an example where the autopsy has determined the cause of death. Now that's important cause I don't have to go into all the economic aspects, like insurance policies, uh, the bereavement of the family, somehow they may feel responsible for the death of this patient. Maybe he was an old man and the daughter was taking care of him, she came late that night to give him some dinner or something and she would always have this guilt, why did my father die etc. when in actual fact it was certainly beyond her control and she can rest easy. I mean you have to think of all the psychologic and

philosophic implications of what an autopsy can do, it can really settle issues.

And in terms of cancer patients, people, a lot of people feel well you know what the diagnosis is, why bother? Well the point is most of them are treated with drugs and radiation. We'd like to know if there's tumor still there, did the drugs work, did the patient die of an infection with no evidence of disease, then perhaps we ought to better treat the infection, perhaps we've over-treated the case, you know, we've left the patient so immune compromise that now he's dying of an infection when he's cured of his disease.

Yeah.

Those are the kind of questions that are terribly important.

Many times you find at an autopsy an incidental finding or disease that has direct bearing on the living. For example, you may autopsy this patient for example who has a tumor and may end up having found tuberculosis at the autopsy table. That means that all the people who came in contact with that patient would now have to be watched or evaluated for tuberculosis or get appropriate therapy where as if we had never done the post, you would never have

realized that. There are other things, there are other diseases that we may find in a in a body that may have direct bearing on the people with respect to genetic counseling. We find a lot of diseases that may have a genetic background, in other words it could be transmitted from one generation to the next and you wouldn't know about it unless you found it at the autopsy and then you appropriately counsel the family as to whether have more children or not or to uh seek advice early on in the pregnancy so at least the patient could be monitored etc.

To learn what the mystery of life is, the glory of creation and to be brought face to face in the autopsy room with your own individual mortality and having to deal with that and having to deal with the theology and the philosophy of life and death which is a necessity before you can proclaim eternal life and before you can comfort the dying and comfort the bereaved. As long as you're not in touch with your own mortality, you won't do the job properly.

THESIS THESIS - and we make sure those are there cause usually the lack of one of the embelical arteries is also a tipoff there are other anomalies present. Another thing, what we do in these pediatric posts is try to make

sure that the anomalies don't fall into a syndrome or a group which has been described as hereditary, we just like to uh uh make sure that it's an isolated fortuitous event, which to the parents should make them rest easier that it uh it won't happen again in another kid and if it is genetic, we want to know about it because they should know about it in terms of uh having other children so that's why I think that uh these posts on infants should be 100%, we should do it on every infant who dies.

It's because people don't know how to deal with death. They are not taught that in medical school, particularly medical doctors, and they avoid it, and they don't want to look at it. And also in a place like uh that's such a fancy place like the Mass General where you have uh top notch people, people who'd give their right arm to get in here as a resident or so they don't wanna, death to them means a failure which is sort of a foolish way of looking at things and they don't want to deal with it.

This is about the case, you can come closer.

This is a 73 year old man who has had uh some type of lymphoma for the past 4 years, he also had hypertension, he was being treated for that. Recently, um a couple months ago, several weeks ago he underwent a splenectomy

because he was very anemic and his spleen was chewing up all the red cells he had left, so I expect to find uh a lot of lymph nodes involved with tumor lymphoma, probably it will be in the liver. He also had a progressive uh encephalopathy, he became less and less conscious uh he lost the use of his legs, there was spinal cord involvement brain involvement, he may have an infection there, we just don't know.

This patient has had bleeding problems and that's again related to the fact that as Terry mentioned the red blood cells have been destroyed by the big spleen and the patient was essentially becoming anemic, as a result of becoming anemic you were beginning to lose the clotting ability of the blood and what happened is you end up with these little hemmorages. So she does a thorough evaluation and all these things are described, you see, in her protocall which she will eventually fill in and write on the blackboard or commit to memory and then immediately after the autopsy is completed, she'll fill these things in.

Now, notice the incision that she makes, it's a typical Y-shaped incision, notice she'll come down the midline and then right down the abdomen and the whole patient is opened up almost like a book, if it's a female

patient obviously we go around the breasts and come down.

This hospital, we have, the budget just for the autopsy service in this hospital is almost close to a million dollars a year. In terms of all the autopsies we do, we do about 800 autopsies a year.

Dr. Peroni will now evaluate and measure the amount that the liver extends below the rib cage, the liver is very large, we expect it to be large in a patient like this because it's probably filled with tumor and for those who are up close, take a look at the liver, zzzzzzzz, you can see the you can see the liver, liver is not really uniform, it has sort of a modelled appearance, there's all tumor treading between those, OK Joe, sorry. Now what Joe is going to do now is take the rib cage off. ZZZZZZZZZZZZ

ZZZZZZZZZZZ. OK, let's take a look at this, this is interesting, notice what's happened to this patient, without knowing any history I can tell you this patient smoked, why? You see how the lungs which should be separated into each cavity are now meeting in the midline, and they are still inflated because they are filled with this man has emphysema and also all this black staining material you see here is the complements of both cigarette smoking and breathing in city air. See all that, so this

man has emphysema, and you can see the chest not it's a barrel shaped chest because the lung has a lot of dead space and they can't expel the air, that's why these people have problems breathing.

We know what tumors can do but we don't know what they really are, and we certainly don't have very good therapies to treat a lot of these tumors and hence patients die, now the only way we can really evaluate the therapies that we use, all the chemotherapy and x radiation and sometimes surgery, is to do the autopsy. It's the only possible way we can do it, the other thing is it also gives us a better understanding as to exactly what the tumor can do to the body, by looking at these patients who died from the tumors we know exactly where the tumors can go, what organs were involved with tumor, what organs were spared and then we can evaluate why these organs are not involved and why they are. So, that is in a nutshell some of the aspects of, of the autopsy: evaluation of the patients disease, get a better understanding of the patient's disease and of course the under, the bottom line of all this all this knowledge is going to be brought to the residents, the medical house staff and to conferences that are being brought and discussed at the hospital and the organs are then looked at by the group in this department

and then they're disseminated around the hospital in various conferences so that this patient who dies in the hospital today, the organs will be reviewed here by the pathology department and then by other people in the hospital uh according to their interests.

There is in this case you know if you have one child with congenital heart disease I think there's something like a 5% chance that you might have a second child with it.

Oh, really?

Yeah. Where as in the general population there would probably be 1% or something like that, or less. So in a sense this is hereditary but it's not as bad as one of these autosomals uh syndromes which is 1 out of 4 chance of having a second child with the same thing, so if you tell a parent that you know the likelihood is 5% or less as opposed to 25% I mean it's, should be encouragement to go and have another child.

Yeah.

Often we'll take a heart and we'll actually fix it in formalin, we'll profuse it with formalin and we'll sit down the next day and spend 3 or 4 hours you know dissecting under bright lights and using a dissecting microscope you know maybe a 10x or something like that to

see very very tiny vessels to make sure we don't make a mistake and we're sitting down and we're comfortable and we're not sawing the thing like a tree trunk or something but we're very very carefully dissecting almost as carefully as a surgeon, except our job is always easier than surgeons because uh,

Because you don't have to make it live.

Because we don't care when it bleeds.

Yeah.

Sometimes uh, its as simple as uh no one asks for an autopsy. That's that's frequently the case, I've in some cases the uh house officers feel that it's the the staff clinicians uh responsibility to obtain permission and uh the staff sort of uh feels that it's man, the residents responsibility and no one will ask.

Oh, I see.

Because if uh the staff person is out of town or can't be reached and the resident uh doesn't know the patient because of the on call schedule, it's someone who isn't taking care of the patient, then no one will ask and and often uh very important uh important questions are not answered. I think that uh autopsies can be obtained uh in almost 100% of the time if someone will just sit down with the family and talk to them and explain why it's important.

It's very important for the conscientious physician to find out whether he has in fact been pursuing the correct course, it's educational for him, and it is a quality control on the physician who's not that able so it's extremely important for the welfare of the living that the autopsy be performed.

It's important for surgeons and for uh diagnosticians to have feedback.

Yeah it's just important I think you know to gauge therapy. I think the reasons for an autopsy is A, the patient dies of something that you absolutely have no idea why the patient died uhm B, it's something some new treatment has been tried and you would like to know the effects of the treatment and just you know to gauge how well you've uh done in terms of taking care of the patient and then obviously if it's an unusual disease you know for research purposes and that sort of thing.

We can take a human tissue a human tumor from an autopsy table for example, and we can try to culture and grow that in the laboratory and then see what kind of drugs will kill that tumor. The only way to, can get that is at the autopsy table, unless the patient gives you permission to do that during surgery, but a lot of patients don't come

to surgery, for instance, patients who have leukemia, they don't, they're not operated on, we made the diagnosis by just looking at blood smears, taking some blood and smearing it on a little piece of glass, we can look at that so at the autopsy table for patients who lets say die of leukemia, we can get tissue from these patients and experiment with them. And I don't care what the anti dissectionists say, that you can look at that you don't have to use animal tissues, you don't have to use human tissues but it can all be done on a blackboard somewhere, it's ridiculous. Unfortunately, the nature of the beast is we must need, we do need human tissue and we can obtain that at the autopsy table.

The orthopedic department would be lost without the cadaver, the, all advancements in hip implants all prostheses have been done through cadavers. The first hip implant was done here by Dr. Smith-Peterson and before he put a prosthesis in the hip he did about 200 cadavers. The aortic balloon which is used in school in the cardiac cath was developed right here in this autopsy room by Dr. Katfis uh there were casts made of the aorta before they would even dare attempt to put a balloon in a live human.

Knee anatomy's pretty, pretty standard but it's fairly subtle, for instance, on a on a total hip I mean

a total knee the kind of the incision you would use is you would open this up, maybe to about here, and then down to maybe about there, but you never expose this much, and you make this incision through here, and you never cut this off in other words, can you imagine how much you can see if this were still attached to that right down there see, you would sort of peak in there and that's all you'd get to see, but here I take that off and crank this thing all the way up and see inside and see the posterior crucial ligament there, you really don't get a good look at, you can see the back of it. Another thing is you don't see the back of the vessels in the back of the knee and it's something we never really see. We do a lot of surgery blindly you make a tiny incision that wide, and you stick your scope in here and you take this thing out, blindly right, and then you always wonder, run through your mind, well one thing you don't want to do is stick your knife too far back there and cut the posterior artery, something you never see the artery except through here, how do you know where it is? You can see it in a book, but that's not really the same thing, it really helps to see it three dimensionally.

If a patient dies and he's basically a healthy person, and god forbid he's hit by a truck or he's killed in an accident, or so, burned, but his bones are basically

very strong, we can take all those bones and put them in a freezer, put 'em take them sterilely, put 'em in a freezer and then when a young patient comes in with a tumor of his arm, we can remove that tumor in the bone and then take one of these bones that we've had in the freezer donated by one of the dead patients, and reimplant that. Now prior to that we would have to do amputations, so we can actually have human bones that are transplanted from a dead person to a live person and save a limb, for example, and we do that now. You well are aware of the fact that eyes, can be the cornea of the eyes can be transplanted so blind people can actually see again through the use of dead peoples corneas. We certainly do that with kidneys and I can see down the line there are gonna be other organs that are going to be transplanted from dead to living people so that we can continually renew our our destinies if you will.

Embalming is far more a mutilation, in embalming what they do is they'll put a trochar in the abdomen and they'll smash and grind up all of the viscera. So if anyone says they don't want an autopsy, believe me, you don't want to be embalmed, at least you've got organs here which are scientifically being examined but once the body unautopsied in the hands of an embalmer, then it is absolute mutilation.

Oh, look at this, there's a little, there's a little tidbit, there's an extra spleen, little spleen. This is a normal spleen and then this is an extra little spleen.

Would that have any function or is it just, uh.

Oh, it probably will function, it's you'll find it quite commonly but it's associated with uh, various congenital malformations. That's why we, for instance, looked earlier whether there was a spleen or not. The presence or absence of a spleen is important because when the spleen is absent it means that the body really didn't make up its mind whether what's right or left and so things get mixed up, and the same is true when you have many spleens, now this is only one little extra spleen which is not that uncommon um OK, so I'm just going to take the spleen off, this little spleen, save, now we'll weigh the spleen.

We know he, that because he was hypoxic that there's going to be a lot of swelling, an edema.

I'd say now that opening the brain that the, the brain the greatest source for teaching material around, the transplants on eyes and uh on temporal bone. This is now the Mass eye and ear is the temporal bone, uh, study bank in the United States, Dr. Shuknik has the largest collection

of ear disease, the bible of ear disease is compiled through his study not only clinically but path, if there's any pathology involving the temporal bone we'll remove the temporal bone and it will be studied, so a lot of the the unrestricted autopsy permission, we will certainly now have that, and also the the otologists and surgeons uh benefit greatly because all of their microsurgery that's done with the ear, I'll tell you frankly, if you've seen the anatomy of the human ear, I wouldn't want to be touched by a surgeon unless he had access to temporal bone, before he worked on me, it's such, the temporal bone is the hardest bone in the body, its called the petros bone, stands for the rock, petr meaning rock, right? Am I right?

Um, Dr. Ment will be by, if she's removing the brain maybe she can describe, well you're in you're on the neuro floor, right. So why don't we just, let that be, OK?